MONTARA WATER AND SANITARY DISTRICT AGENDA

For Meeting Of: January 16, 2025

TO: BOARD OF DIRECTORS

FROM: Clemens Heldmaier, General Manager

SUBJECT: **Review and Possible Action Concerning Auxiliary Connection for Pillar Ridge Community**

The District Water Engineer completed the design of a new auxiliary connection to the MWSD's 12-inch-diameter water main in the Airport Street for the Pillar Ridge community. When constructed, this project would provide the second means of supplying the Pillar Ridge community with high quality drinking water from the MWSD sources and storage facilities to augment the existing connection to the water main that transects the Half Moon Bay Airport.

This project has been included in the 2024-2025 Water Capital Improvements Program (Water CIP) and is funded. The engineer's opinion of the construction cost is the range of $85,000 to $115,000. Upon the Board's approval, staff will advertise the project for public bidding, receive bids, and evaluate them. Staff expects to bring this project back to the Board for approval in March 2025 with construction starting in April-May 2025 and competing by September 2025.

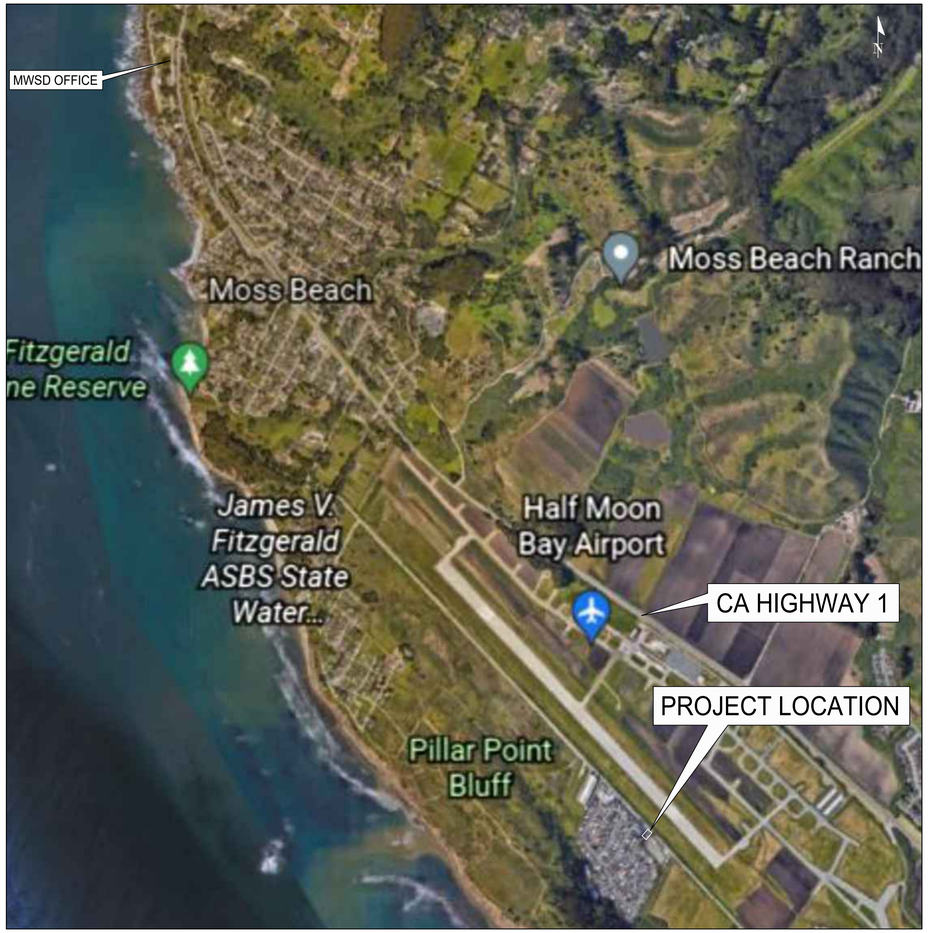
The plans for the project are attached for the Board's consideration.

Recommendation: Authorize the General Manager to issue the Auxiliary Connection for Pillar Ridge Project for public bidding, accept and evaluate bids from qualified contractors, and present the apparent responsive and responsible bid for the Board's approval.

MONTARA WATER AND SANITARY DISTRICT

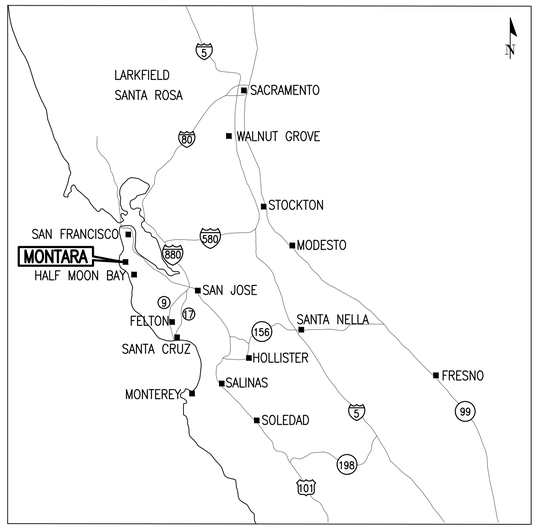
PILLAR RIDGE AUXILIARY CONNECTION PROJECT

100% DESIGN DRAWINGS



LOCATION MAP

SCALE: NONE



VICINITY MAP

SCALE: NONE

SHEET INDEX

PROJECT DIRECTORY

OWNER:	CIVIL ENGINEER:
MONTARA WATER AND SANITARY DISTRICT 8888 CABRILLO HIGHWAY MONTARA, CA 94037 PH: (650)728-3545	SRT CONSULTANTS 792 BAY STREET SAN FRANCISCO, CA 94109 PH: (415)776-5800 FAX: (415)776-5200
CONTRACTOR: TBD	

REVISIONS

SYM.	DESCRIPTION	DATE	APPROVED

NOT FOR CONSTRUCTION

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792 Bay Street
San Francisco, CA 94109
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MONTARA WATER AND SANITARY DISTRICT
8888 CABRILLO HIGHWAY
MONTARA, CA 94037

PILLAR RIDGE AUXILIARY CONNECTION PROJECT

TITLE SHEET

VERIFY SCALE
0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DATE	JAN 2025
SCALE	AS SHOWN
DESIGN	N. MAO
DRAWN	K. CHUNG
CHECK	N. MAO
SHEET	1 OF 7

G01

DRAWING NAME: \\reserver\srt\01_PROJECTS\Montara Water and Sanitary District (1000)\01_ACTIVE\2024 Pillar Ridge Aux Connection\CAD\SHEETS\G01 - Title Sheet.dwg
PLOT DATE: Jan 08, 2025 - 4:27pm PLOTTED BY: Key Chung

GENERAL NOTES

1. NOTIFY UNDERGROUND SERVICE ALERT (USA) 48 HOURS PRIOR TO ANY EXCAVATION. CALL 811.
2. CONTRACTOR'S ATTENTION SHALL BE MADE TO THE STANDARD TRENCH DETAIL.
3. CONTRACTOR'S SUPERINTENDENT IS REQUIRED TO ATTEND A PRE-CONSTRUCTION WALK-THROUGH MEETING. SUPERINTENDENT IS REQUIRED TO BE ON JOB SITE DURING ALL PHASES OF THE WORK AND CONTRACTOR SHALL NOT REPLACE SUPERINTENDENT WITHOUT PRIOR WRITTEN APPROVAL OF MONTARA WATER AND SANITARY DISTRICT (MWSD). A MOBILE PHONE NUMBER AND A 24-HOUR EMERGENCY NUMBER SHALL BE PROVIDED FOR CONTRACTOR'S SUPERINTENDENT.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING FACILITIES AND EXISTING UTILITIES AND POTHOLING AS NECESSARY TO CONFIRM SIZE, DEPTH, ALIGNMENT, AND MATERIAL OF EXISTING FACILITIES. THE TYPES, LOCATIONS, SIZES, AND DEPTHS OF EXISTING OR PLANNED UNDERGROUND OR ABOVEGROUND UTILITIES, STRUCTURES, ROADS, PIPELINES, TOPOGRAPHY, ETC., AS SHOWN ON THESE PLANS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE UTILITIES AND STRUCTURES. HOWEVER, MWSD IS NOT RESPONSIBLE FOR THE COMPLETENESS OR ACCURACY OF SAID INFORMATION.
5. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS AND ENVIRONMENTAL LAWS OF ALL JURISDICTIONAL AGENCIES. CONTRACTOR IS ALSO RESPONSIBLE FOR PROJECT SITE SAFETY AND FOR PUBLIC SAFETY INCLUDING TRAFFIC CONTROL, 24 HOURS PER DAY FOR ALL DAYS FROM NOTICE TO PROCEED THROUGH THE NOTICE OF FINAL COMPLETION.
6. ALL MATERIALS AND INSTALLATION OF WATER SYSTEM APPURTENANCES SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF MWSD AND SAN MATEO COUNTY. CONTRACTOR TO PROVIDE A MATERIALS SUBMITTAL TO MWSD FOR APPROVAL PRIOR TO BEGINNING WORK.
7. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL DAMAGE TO EXISTING PROPERTY AND STRUCTURES RESULTING FROM HIS OPERATIONS DURING CONSTRUCTION AND SHALL REPLACE IN KIND OR BETTER TO THE SATISFACTION OF THE PROPERTY OWNER AND/OR MWSD PRIOR TO THE FINAL PAYMENT. THE CONTRACTOR SHALL EXERCISE CARE WHEN WORKING NEAR RETAINING WALLS AND SHALL BE RESPONSIBLE FOR RESTORING ANY WALL TIE-BACKS DISTURBED DURING EXCAVATION. ANYTHING NOT SPECIFICALLY CALLED OUT ON PLANS TO BE PROTECTED IN PLACE SHALL BE ASSUMED TO REQUIRE PROTECTION IN PLACE.
8. ALL FACILITIES TO BE OWNED AND MAINTAINED BY MWSD SHALL BE INSPECTED AND APPROVED BY MWSD, INCLUDING INSPECTION AND APPROVAL OF ALL FITTINGS, PIPES, AND CONNECTIONS PRIOR TO BACKFILLING.
9. IF A MAIN BREAK OCCURS WITHIN THE SCOPE OF THE PROJECT, CONTRACTOR SHALL NOTIFY MWSD IMMEDIATELY, AND SHALL BE RESPONSIBLE FOR REPAIRING THE BREAK.
10. GENERAL CONSTRUCTION SEQUENCE:
    - MOBILIZE
    - ISOLATE AND DRAIN (E) 12" WATER MAIN
    - INSTALL NEW PIPING, VALVES, VAULTS, AND OTHER APPURTENANCES
    - PRESSURE TEST AND DISINFECT ALL NEW PIPING
    - BACKFILL AND COMPACT TRENCHES
    - RESTORE PAVEMENT SURFACES PER MWSD SPECIFICATIONS
    - DEMOBLIZE
11. STAGING AREA TO BE DETERMINED IN THE FIELD WITH MWSD.
12. CONSTRUCTION OPERATION TO BE COORDINATED WITH MWSD, PARTICULARLY WITH RESPECT TO USE OF CRANE(S). CRANE(S) SHALL BE CERTIFIED AS OPERATIONAL TO THE SATISFACTION OF LOCAL AND STATE REQUIREMENTS. IT SHOULD BE NOTED THAT THERE ARE EXISTING OVERHEAD POWER LINES IN THE VICINITY OF THE PROJECT LOCATION.
13. ALL WATER DISCHARGED FROM THE SITE SHALL MEET ENVIRONMENTAL COMPLIANCE REQUIREMENTS BY THE STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD.

LEGEND

- PG&E NATURAL GAS (GAS)
- OVERHEAD ELECTRICAL (OHE)
- SANITARY SEWER (SS)
- WATER (W)
- TELECOMMUNICATION CABLE (T)
- PROPERTY LINE
- GATE VALVE, NORMALLY OPEN
- GATE VALVE, NORMALLY CLOSED
- CHECK VALVE
- FLOW ARROW
- DROP INLET
- MANHOLE
- BALL VALVE
- PRESSURE GAUGE
- FLOW METER (M)
- PRESSURE REDUCING VALVE
- FIRE HYDRANT

ABBREVIATIONS

(E)	EXISTING
(E/F)	EXISTING AND FINISHED
AC	ASPHALT CONCRETE
AGG	AGGREGATE
APPROX.	APPROXIMATE
ARV	AIR RELEASE VALVE
BO	BLOW OFF
CB	CATCH BASIN
CIP	CAST IRON PIPE
CONC	CONCRETE
CTE	CONNECT TO EXISTING
DI	DUCTILE IRON
DIP	DUCTILE IRON PIPE
DIA, Ø	DIAMETER
EP	EDGE OF PAVEMENT
FCA	FLANGED COUPLING ADAPTER
GRD	GRADE
GV	GATE VALVE
BRK	BREAK
HORIZ.	HORIZONTAL
HWY	HIGHWAY
INV	INVERT
LF	LINEAR FEET
MH	MANHOLE
MAX	MAXIMUM
MIN	MINIMUM
MWSD	MONTARA WATER AND SANITARY DISTRICT
(N)	NEW
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
PB	PULL BOX
PP	POWER POLE
PVC	POLYVINYL CHLORIDE PIPE
PRV	PRESSURE REDUCING VALVE
SHT	SHEET
SPECS	SPECIFICATIONS
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
SST	STAINLESS STEEL
STA	STATION
SVC	SERVICE
T.O.P.	TOP OF PIPE
TBD	TO BE DETERMINED
TYP	TYPICAL
UG	UNDERGROUND
VCP	VITRIFIED CLAY PIPE
V.I.F.	VERIFY IN FIELD
VERT.	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
W/	WITH
WTR	WATER

SYM.	DESCRIPTION	DATE	APPROVED
	REVISIONS		

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MONTARA, CA 94037

PILLAR RIDGE AUXILIARY CONNECTION PROJECT

NOTES, LEGEND, AND ABBREVIATIONS

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DATE	JAN 2025
SCALE	AS SHOWN
DESIGN	N. MAO
DRAWN	K. CHUNG
CHECK	N. MAO
SHEET	2 OF 7

G02

DRAWING NAME: \\newserver\srt\01_PROJECTS\Montara Water and Sanitary District (1000)\01_ACTIVE\2024 Pillar Ridge Aux Connection\CAD\SHEETS\G02- Notes, Legend, Abbreviations.dwg
PLOT DATE: Jan 08, 2025 - 4:28pm PLOTTED BY: Key Chung

SPECIFICATIONS

1. GENERAL CONSTRUCTION REQUIREMENTS - See MWSD standard specifications sections 8 to 12.
2. EARTHWORK - See MWSD standard specification section 13.
3. DEMOLITION - See MWSD standard specification section 15.
4. SURFACE RESTORATION - See MWSD standard specification section 20.
5. WATER UTILITY DISTRIBUTION PIPING AND APPURTENANCES
   - A. Water Main Installation - see MWSD standard specification section 16-01.
   - B. Water Main Disinfection - see MWSD standard specification section 16-06.
   - C. Inspections - see MWSD standard specification section 16-07.
   - D. Pressure Testing - see MWSD standard specification section 16-08.
   - E. Ductile Iron Pipes for In-ground Water Mains - see MWSD standard specification section 14-01.A.2.
   - F. Fittings for Ductile Iron Pipes - see MWSD standard specification section 14-04.A.
   - G. Joints - See MWSD standard specification section 14-02.
   - H. Flexible Couplings - See MWSD standard specification section 14-05.
   - I. Fire Hydrants - See MWSD standard specification section 16-02 and local fire protection district standards.
   - J. Valves
     1. Gate Valves - see MWSD standard specification section 14-07.A
     2. Pressure Reducing Valves
        - a. Pressure Reducing Valves shall be accurate, pilot-operated regulators capable of holding downstream pressure to a pre-determined limit. When downstream pressure exceeds the pressure setting of the control pilot,the main valve and pilot valve close drip-tight.
        - b. Pressure Reducing Valves shall have:
          - i. ductile iron bodies conforming to ASTM A536
          - ii. cast iron disc retainer & diaphragm washer
          - iii. bronze disc guide, seat, & cover bearing
          - iv. Buna-N rubber disc
          - v. Nylon-reinforced Buna-N rubber diaphragm
          - vi. stainless steel stem, nut, & spring
          - vii. flanges per ANSI B16.42 Class 150 standards.
        - c. Control pilots shall have low lead bronze bodies with Type 303 stainless steel trim and Buna-N synthetic rubber parts.
        - d. Pressure Reducing Valves shall be factory coated with fusion-bonded epoxy per NSF/ANSI 61 standards.
        - e. Pressure Reducing Valves shall be Cla-Val Model 90-01 Pressure Reducing Valves, or approved equal.
   - J. Valve boxes - see MWSD standard specification 14-09.
   - K. Propeller/Turbine Flow Meter
     1. Flow Element
        - a. Type: Mechanically coupled propeller/turbine flowmeter.
        - b. Function/performance:
          - i. Accuracy: +/- 2% of rate
          - ii. Operating Temperature: Up to 140 F maximum.
          - iii. Repeatable to +/- 0.25% of range.
        - c. Physical
          - i. Propeller or rotor shall be compatible with process fluid in which it is measuring.
          - ii. Propeller shafts shall drive the vertical shaft through the magnetic coupling.
          - iv. Meters shall be flange mounted with ANSI 150 lb. flanged ends that shall be compatible and similar to process pipe.
          - v. Finish: All external surfaces shall have a chemical and corrosion resistant finish.
     2. Propeller Flow Indicator-Totalizer
        - a. Type
          - i. Mechanical Drive
          - ii. Mounted directly on meter.
        - b. Functional/Performance
          - i. Accuracy (including flow tube): +/- 2 percent of flow rate within the range specified for each meter size.
          - ii. Operating Temperature: 32 to 140 degrees F.
          - iii. Display: full 4" diameter, 250 degree sweep dial with a six digit, straight reading type totalizer and sweep hand test. This indicator dial shall be furnished in GPM, CFS, MGD, or any standard liquid measuring units of MWSD's choice. The bonnet, with padlock hasp, shall be o-ring sealed to the meter head.
          - iv. The flow element and the flow indicator/totalizer shall be from the same manufacturer and function as one working unit.
     3. Manufacturers
        - a. McCrometer, Inc.
          - i. McCrometer Model ML04 flanged tube meter with Model CN-062 indicator-totalizer. Register extension (Model CN 02) as needed.
          - b. Or approved equal.
   - L. Flange insulation gasket kit by M&P Flange & Pipe Protection, or approved equal, and shall be provided when joining together two dissimilar metals. Gaskets shall be full-face type with pre-punched holes.
   - M. Wall Penetrations
     1. Seal spaces between pipes and pipe openings with link-type seals as specified in the drawings.
     2. Mechanical seals shall be NSF 61 certified Model "S61" EPDM LINK-SEAL by Garlock or approved equal and shall utilize 316-stainless assembly hardware.
6. PRECAST CONCRETE STRUCTURES
   - A. Design Requirements
     1. Precast reinforced air-entrained concrete structures designed to ASTM C890, AASHTO HS20 live loading and installation conditions, and manufactured to conform to ASTM C913.
     2. Maximum water table elevation: grade elevation.
     3. Minimum 28-day concrete compressive strength: 5,000 psi.
     4. Minimum buoyancy safety factor: 1.25.
   - B. Submittals
     1. Professional Engineer licensed in the state of California shall seal structural design calculations.
     2. The precast concrete structure manufacturer shall submit for Engineer's review:
        - a. For standard precast concrete structures cut sheets showing conformance to project drawings and requirements and to applicable ASTM specifications listed in this section.
        - b. For proprietary precast concrete structures – standard plans or informative literature.
        - c. Supporting calculations and design details shall be available upon request. The precast concrete structure manufacturer shall warrant that such products will perform as specified herein.

     3. For custom-made precast concrete structures shop drawings showing complete design, installation, and construction information in such detail as to enable the Engineer to determine the adequacy of the proposed structures for the intended purpose. Details of steel reinforcement size and placement as well as supporting design calculations, dimensions, and weight of each section shall be included. The drawings shall include a schedule, which will list the size and type of precast concrete structures at each location where they are to be used.

     4. Submittals shall show locations and dimensions to all penetrations and special embed items. Product dimensions and thicknesses shall be shown.
     5. Submit product datasheet and installation instructions of joint sealants, gaskets, and mechanical seals.
     6. Provide upon Engineer's request:
        - a. Product datasheets and installation instructions of anchors and lifting inserts;
        - b. Copies of material certifications and/or laboratory test reports, including mill tests and all other test data, for Portland cement, blended cement, pozzolans, ground granulated blast-furnace slag, silica fume, aggregate, admixtures, and curing compound proposed for use.
        - c. Copies of test reports showing that the mix has been successfully tested to produce concrete with the properties specified and will be suitable for the project conditions. Such tests may include compressive strength, plastic air content, temperature of freshly mixed concrete, and slump of freshly mixed concrete.
   - C. Quality Assurance
     1. The precast concrete manufacturer shall be certified by the National Precast Concrete Association's Plant Certification Program prior to and during production of the structures for the Work.
     2. The precast concrete manufacturer shall have been in the business of producing precast concrete products similar to those specified for a minimum of five (5) years.
   - D. Delivery, Storage, and Handling
     1. Transport and handle precast concrete units with equipment designed to protect units from damage.
     2. Do not place concrete units in position to cause overstress, warp or twist.
     3. Conduct operations not to interfere with, interrupt, damage, destroy, or endanger integrity of surface or subsurface structures or utilities, and landscape in immediate or adjacent areas.
   - E. Concrete
     1. Concrete shall be a uniform mix of quality materials listed below. Mix proportions shall be determined by following the standards in ACI 318.
     2. Portland Cement: ASTM C150, Type I, II, III or V
     3. Aggregates: ASTM C33.
     4. Water: Clean and free of deleterious substances in amounts harmful to concrete or embedded metals.
     5. Admixtures:
        - a. Air-entraining: ASTM C260
        - b. Water reducing, retarding, accelerating, high range water reducing: ASTM C494
        - c. Pozzolans, fly ash and other mineral admixtures: ASTM C618
        - d. Ground granulated blast furnace slag: ASTM C989
        - e. Pigments: Non-fading and lime-resistant
   - F. Reinforcement and Connection Materials
     1. Provide all reinforcement, accessory, and connection materials required. Concrete reinforcement shall be steel bars or welded wire fabric, or a combination thereof.
     2. Reinforcing Bars: ASTM A615.
     3. Reinforcing Wire: ASTM A82.
     4. Welded Wire Fabric: ASTM A185.
     5. All metal items (plates, angles, etc.) embedded in concrete shall be ASTM A36 structural steel.
   - G. Grout and Mortar
     1. Cement grout: Portland cement with enough water for the required strength and sand for proper consistency. May contain mineral or chemical admixtures, if approved by Engineer.
     2. Non-shrink grout: Premixed, packaged expansive and non-expansive shrink-resistant grout.
     3. Repair mortar and an epoxy bonding agent may be used to repair minor surface damage to precast sections. Proposed repair products shall be submitted to Engineer before use, and shall be installed per the manufacturer instructions.
   - H. Joints
     1. Include a continuous watertight seal on the concrete base and between successive precast structure sections, which meets the following standards:
        - i. Rubber Gaskets: ASTM C443
        - ii. Preformed Flexible Joint Sealants: ASTM C990
        - iii. Elastomeric Joint Sealants: ASTM C920
        - iv. Exterior Sealing Bands: ASTM C877.
   - I. Structure Frame and Cover
     6. Structure frame and cover shall be A36 Steel to be hot dip galvanized after fabrication.
     7. Frame and cover designed for H20 loading.
   - J. Assemblies
     1. Forms for manufacturing precast concrete structures shall be of the type and design consistent with industry standards. They should be capable of consistently providing uniform products and dimensions. Forms shall be constructed so that the forces and vibrations to which the forms will be subjected can cause no product damage. Forms shall be cleaned of concrete build-up after each use. Form release agents shall not be allowed to build up on the form casting surfaces.
     2. Reinforcement: cages of reinforcement shall be fabricated either by tying the bars, wires or welded wire fabric into rigid assemblies. Reinforcing shall be positioned as specified by the design and so that the concrete cover conforms to ACI 318 requirements. The tolerance on concrete cover shall be one-third of that specified but not more than 1/2 inches. Concrete cover shall not be less than 1/2 inches.
     3. Embedded Items shall be positioned at locations specified in the design documents. Inserts, plates,weldments, lifting devices and other items to be imbedded in precast concrete products shall be held rigidly in place so that they do not move significantly during casting operations.
   - K. Placing Concrete
     1. Concrete shall be deposited into forms as near to its final location as practical. The free fall of the concrete shall be kept to a minimum. Concrete shall be consolidated in such a manner that segregation of the concrete is minimized and honeycombed areas are kept to a minimum. Vibrators used to consolidate concrete shall have frequencies and amplitudes sufficient to produce well consolidated concrete.
     2. Recommendations for cold weather concreting are given in detail in Cold Weather Concreting reported by ACI Committee 306. Adequate equipment shall be provided for heating concrete materials and protecting concrete during freezing or near-freezing weather. All concrete materials and all reinforcement, forms, fillers, and ground with which concrete is to come in contact shall be free from frost. Frozen materials or materials containing ice shall not be used. In cold weather the temperature of concrete at the time of placing shall not be below 45°F. Concrete that freezes before its compressive strength reaches 500 psi shall be discarded.
     3. Recommendations for hot weather concreting are given in detail in Hot Weather Concreting reported by ACI Committee 305. During hot weather, proper attention shall be given to ingredients, production methods, handling, placing, protection, and curing to prevent excessive concrete temperatures or water evaporation that could impair required strength or serviceability of the member or structure. The temperature of concrete at the time of placing shall not exceed 90°F.
   - L. Curing
     1. Curing by Moisture Retention: moisture shall be prevented from evaporating from exposed surfaces until adequate strength for stripping is reached.
     2. Surfaces that will be exposed to weather during service shall be cured as above a minimum of 3 days. Forms shall be considered effective in preventing evaporation from the contact surfaces. If air temperature is below 50°F the curing period shall be extended as required by the Engineer.
     3. Curing with Heat and Moisture: concrete shall not be subjected to steam or hot air until after the concrete has attained its initial set. Steam, if used, shall be applied within a suitable enclosure, which permits free circulation of the steam. If hot air is used for curing, precautions shall be taken to prevent moisture loss from the concrete. The temperature of the concrete shall not be permitted to exceed 160°F. These requirements do not apply to products cured with steam under pressure in an autoclave.
     4. Products shall not be removed from the forms until the concrete reaches the compressive strength for stripping required by the design. If no such requirement exists, products may be removed from the forms after the final set of concrete provided that stripping damage is minimal.
     5. Products shall not be shipped until they are at least 5 days old, unless it can be shown that the concrete strength has reached at least 75% of the specified 28-day strength, or that damage will not be caused which will impair the performance of the product
   - M. Backfill
     1. Suitable backfill material shall be placed after concrete in structure has reached its required compressive strength and flexural strength, never before 14 calendar days after initial concrete placement.
     2. Backfill material shall be placed simultaneously on all sides of structure so the fill is kept at approximately the same elevation at all times.
     3. The 3 feet closest to all walls or wing faces shall be compacted using pneumatic or hand tampers only.
   - N. Inspection
     1. Request inspection by Engineer prior to backfill.

SYM.	DESCRIPTION	DATE	APPROVED
	REVISIONS		

NOT FOR CONSTRUCTION

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792 Bay Street
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MONTARA WATER AND SANITARY DISTRICT
8888 CABRILLO HIGHWAY
MONTARA, CA 94037

PILLAR RIDGE AUXILIARY CONNECTION PROJECT

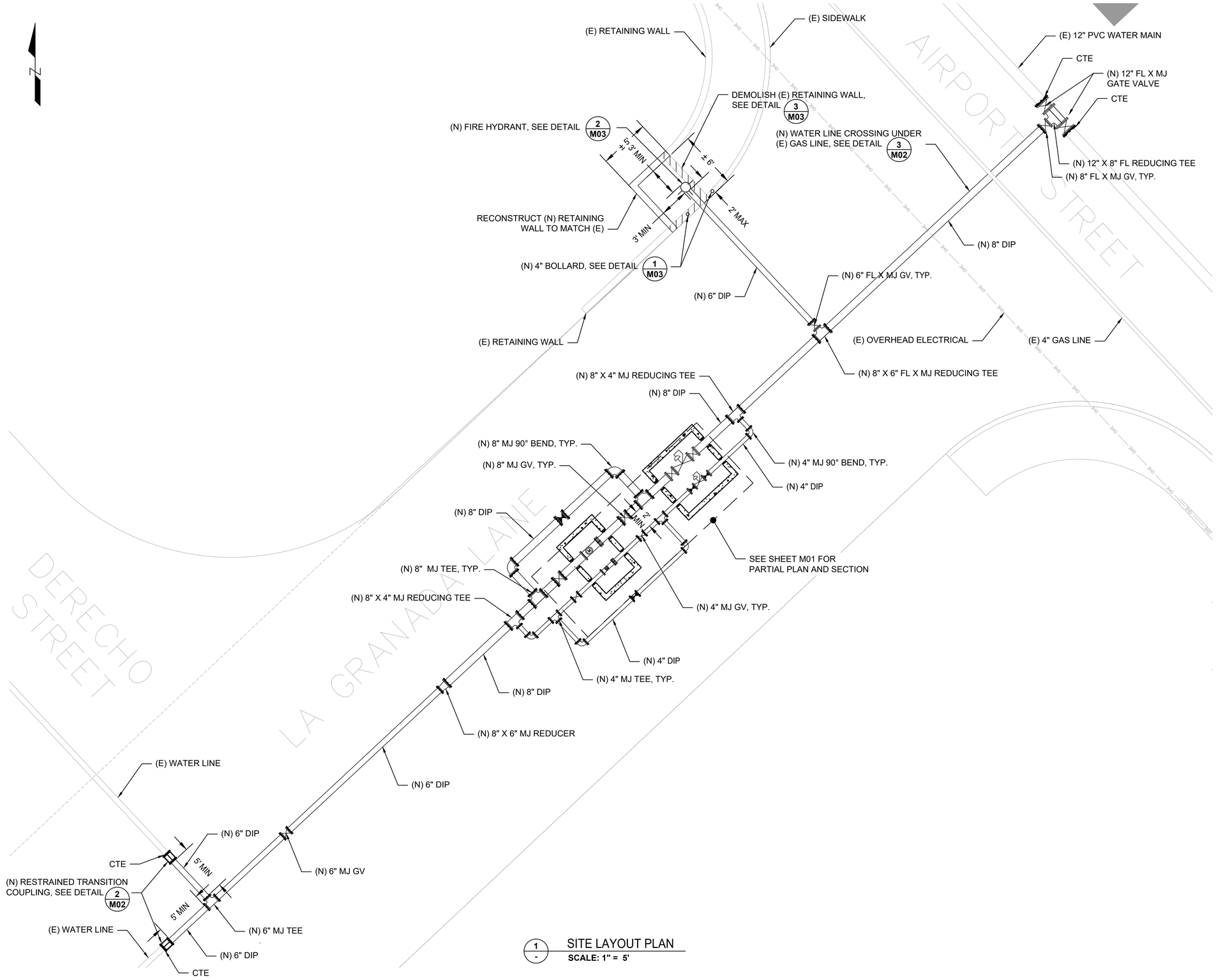
PROJECT SPECIFICATIONS

VERIFY SCALE
0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DATE	JAN 2025
SCALE	AS SHOWN
DESIGN	N. MAO
DRAWN	K. CHUNG
CHECK	N. MAO
SHEET	3 OF 7

G03

DRAWING NAME: \\reneserver\srt\01_PROJECTS\Montara Water and Sanitary District (1000)\01_ACTIVE\2024 Pillar Ridge Aux Connection\CAD\SHEETS\G03 - PROJECT SPECIFICATIONS.dwg
PLOT DATE: Jan 08, 2025 - 3:31pm PLOTTED BY: Key Chung



1 - SITE LAYOUT PLAN
SCALE: 1" = 5'

NOTES:
1. ALL UTILITIES ARE SHOWN TO THE BEST OF KNOWLEDGE. CONTRACTOR TO VERIFY LOCATION, SIZE, AND MATERIAL IN FIELD.
2. UNLESS NOTED OTHERWISE ON THE PLANS, MJ CONNECTIONS ARE REQUIRED FOR ALL BURIED PIPES, FITTINGS, AND VALVES. FLANGED CONNECTIONS ARE REQUIRED FOR ALL PIPES, FITTINGS, AND VALVES WITHIN THE VALVE VAULT

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MONTARA, CA 94037

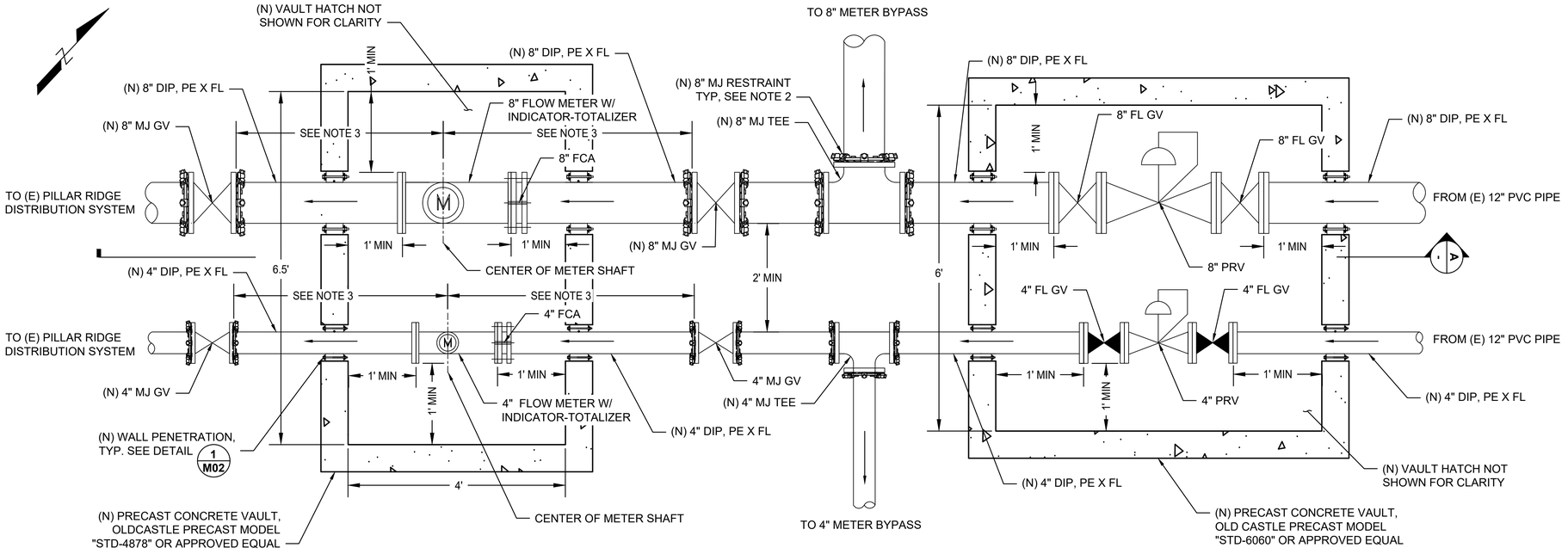
PILLAR RIDGE AUXILIARY CONNECTION PROJECT

CIVIL SITE PLAN

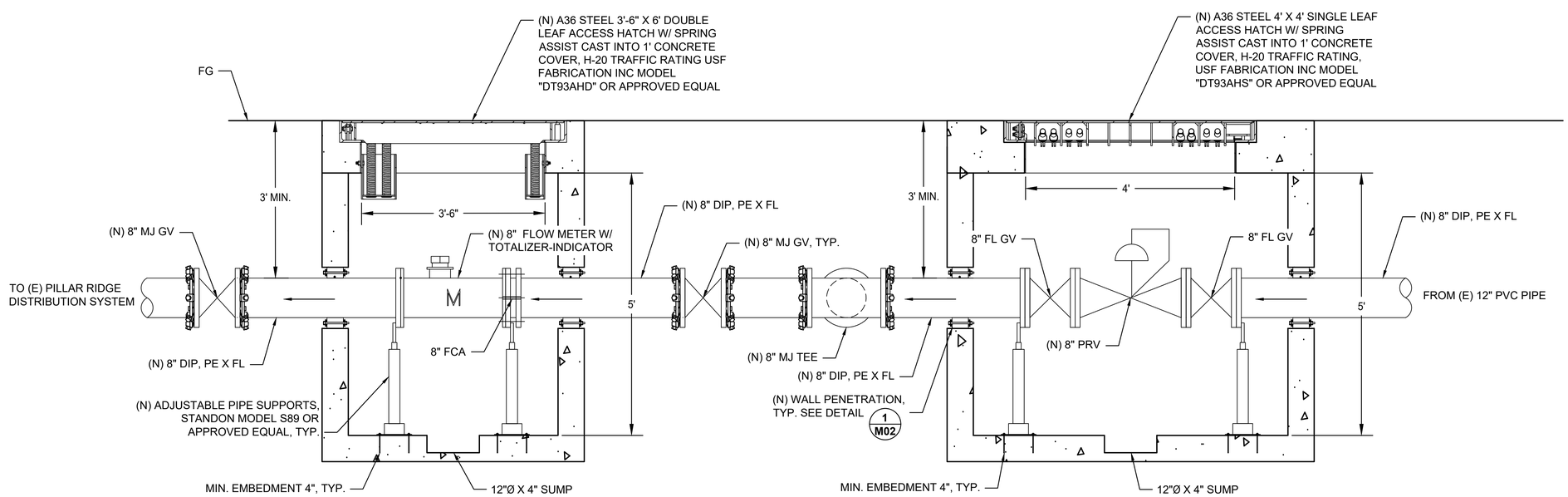
DATE	JAN 2025
SCALE	AS SHOWN
DESIGN	N. MAO
DRAWN	K. CHUNG
CHECK	N. MAO
SHEET	4 OF 7

C01

DRAWING NAME: \\reserve\srt\01_PROJECTS\Montara Water and Sanitary District (1000)\01_ACTIVE\2024 Pillar Ridge Aux Connection\CAD\SHEETS\C01 CIVIL SITE PLAN.dwg
PLOT DATE: Jan 08, 2025 - 5:43pm PLOTTED BY: Key Chung



1 / - VALVE & METER VAULTS PARTIAL PLAN
NTS



A / - VALVE & METER VAULTS SECTION VIEW
NTS

NOTES:
1. CONTRACTOR TO VERIFY ALL (E) UTILITIES IN THE FIELD.
2. MJ RESTRAINT TO BE EBAA IRON MEGALUG 1100 OR APPROVED EQUAL, SIZE TO MATCH PIPING.
3. PROVIDE STRAIGHT RUN PIPING PER METER MANUFACTURER'S RECOMMENDATIONS.

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MONTARA, CA 94037

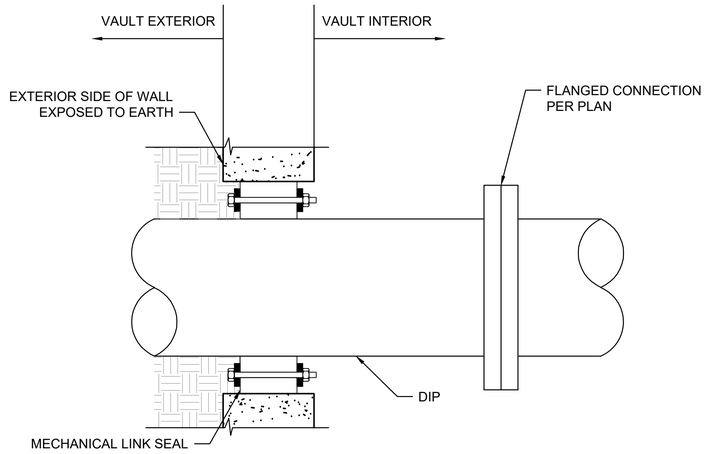
PILLAR RIDGE AUXILIARY CONNECTION PROJECT

VALVE & METER VAULTS PLAN & SECTION VIEWS

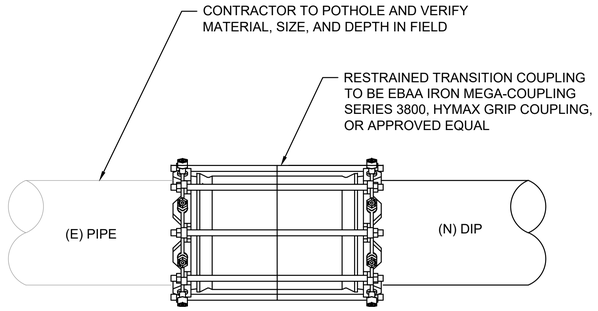
DATE	JAN 2025
SCALE	AS SHOWN
DESIGN	N. MAO
DRAWN	K. CHUNG
CHECK	N. MAO
SHEET	5 OF 7

M01

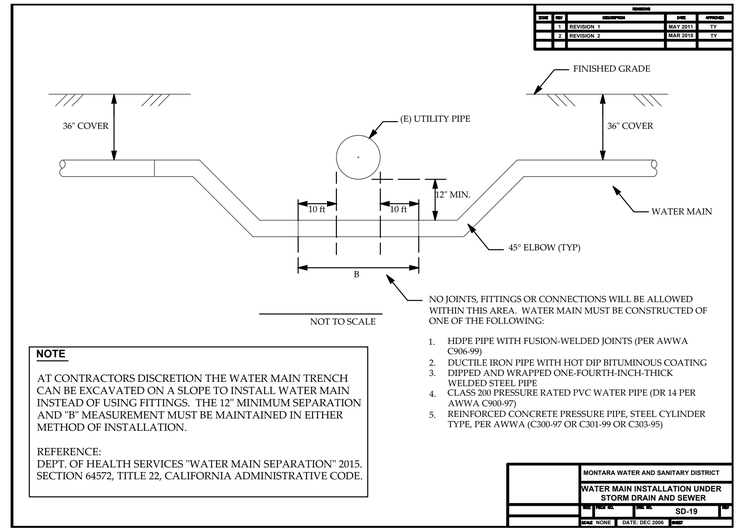
DRAWING NAME: \\reserver\srt\01_PROJECTS\Montara Water and Sanitary District (1000)\01_ACTIVE\2024 Pillar Ridge Aux Connection\CAD\SHEETS\M01 MECHANICAL PLAN AND SECTION.dwg
PLOT DATE: Jan 08, 2025 - 3:33pm PLOTTED BY: Kay Chung



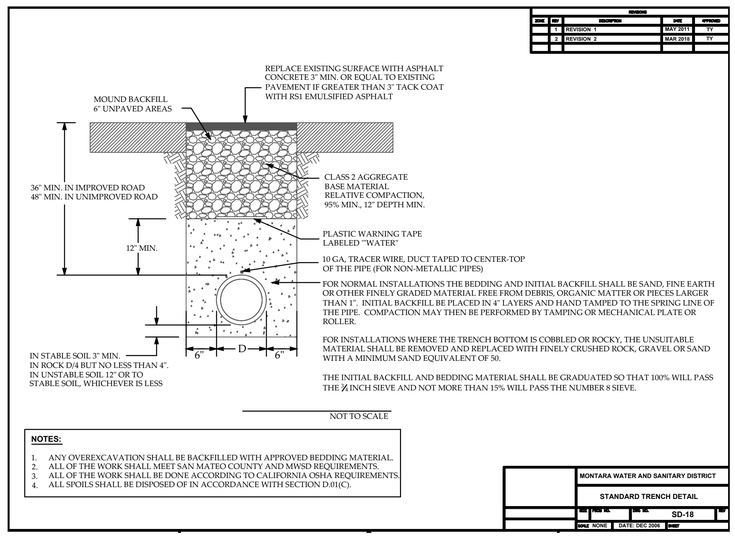
1 - VAULT PENETRATION DETAIL
NTS



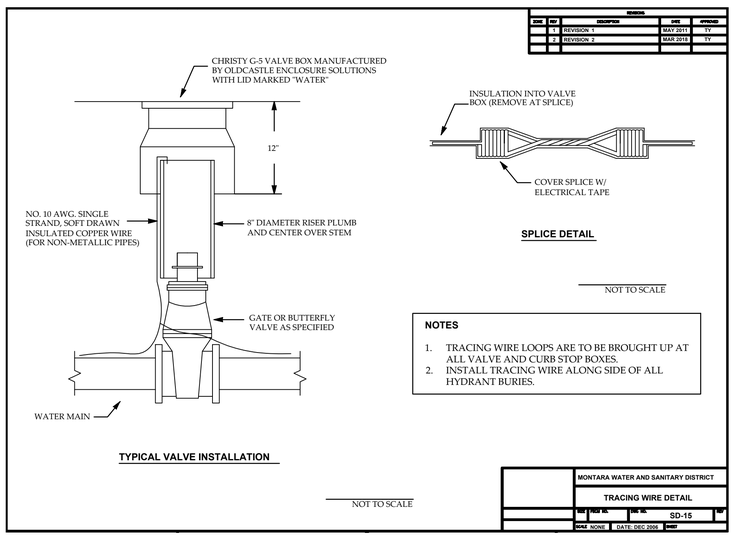
2 - RETRAINED TRANSITION COUPLING CONNECTION DETAIL
NTS



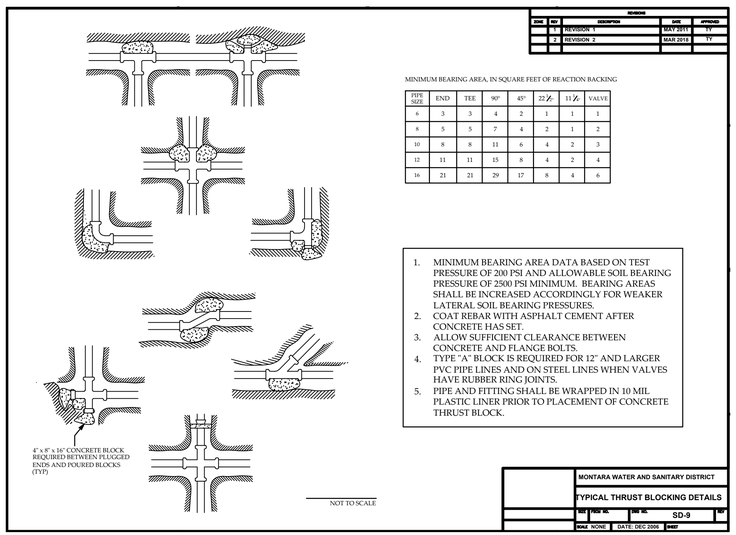
3 - WATER MAIN INSTALLATION UNDER OTHER UTILITIES
NTS



4 - STANDARD TRENCH DETAIL
NTS



5 - VALVE INSTALLATION AND TRACER WIRE DETAIL
NTS



MINIMUM BEARING AREA, IN SQUARE FEET OF REACTION BACKING

PIPE SIZE	END	TEE	90°	45°	22 ½°	11 ¼°	VALVE
6	3	3	4	2	1	1	1
8	5	5	7	4	2	1	2
10	8	8	11	6	4	2	3
12	11	11	15	8	4	2	4
16	21	21	29	17	8	4	6

1. MINIMUM BEARING AREA DATA BASED ON TEST PRESSURE OF 200 PSI AND ALLOWABLE SOIL BEARING PRESSURE OF 2500 PSI MINIMUM. BEARING AREAS SHALL BE INCREASED ACCORDINGLY FOR WEAKER LATERAL SOIL BEARING PRESSURES.
2. COAT REBAR WITH ASPHALT CEMENT AFTER CONCRETE HAS SET.
3. ALLOW SUFFICIENT CLEARANCE BETWEEN CONCRETE AND FLANGE BOLTS.
4. TYPE "A" BLOCK IS REQUIRED FOR 12" AND LARGER PVC PIPE LINES AND ON STEEL LINES WHEN VALVES HAVE RUBBER RING JOINTS.
5. PIPE AND FITTING SHALL BE WRAPPED IN 10 MIL PLASTIC LINER PRIOR TO PLACEMENT OF CONCRETE THRUST BLOCK.

MONTARA WATER AND SANITARY DISTRICT
TYPICAL THRUST BLOCKING DETAILS
SD-9
SCALE NONE
DATE: DEC 2006

6 - THRUST BLOCK DETAIL
NTS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	1	REVISION 1	MAY 2011	TY
	2	REVISION 2	MAR 2013	TY

NOT FOR CONSTRUCTION

S R T consultants
792 Bay Street
San Francisco, CA 94109
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MONTARA WATER AND SANITARY DISTRICT
8888 CABRILLO HIGHWAY
MONTARA, CA 94037

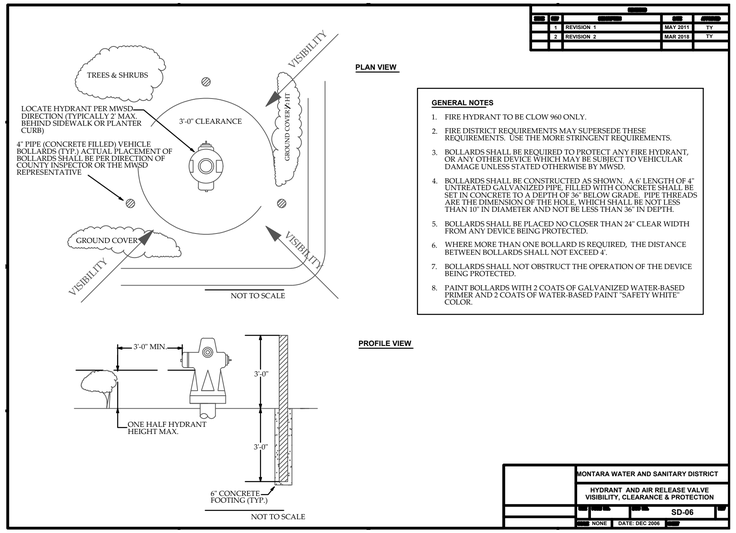
PILLAR RIDGE AUXILIARY CONNECTION PROJECT

DETAILS I

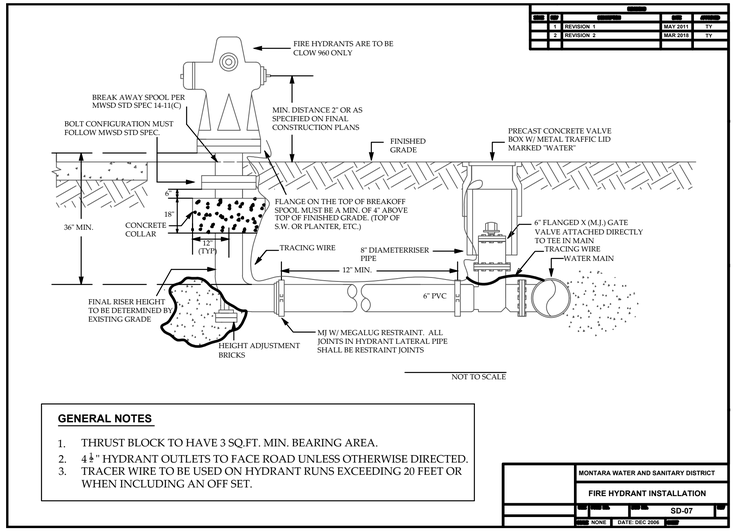
DATE	JAN 2025
SCALE	AS SHOWN
DESIGN	N. MAO
DRAWN	K. CHUNG
CHECK	N. MAO
SHEET	6 OF 7

M02

DRAWING NAME: \\reserver\srt\01_PROJECTS\Montara Water and Sanitary District (1000)\01_ACTIVE\2024 Pillar Ridge Aux Connection\CAD\SHEETS\M02 DETAILS.dwg
PLOT DATE: Jan 08, 2025 - 3:34pm PLOTTED BY: Kay Chung



1 - HYDRANT AND AIR RELEASE VALVE VISIBILITY, CLEARANCE, & PROTECTION
NTS



2 - FIRE HYDRANT INSTALLATION
NTS

3 - RETAINING WALL DEMOLITION
NTS

NOTES:
1. THE MATERIAL, STYLE, AND DESIGN OF THE NEW RETAINING WALL SECTION SHALL MATCH THE EXISTING AS CLOSELY AS POSSIBLE.
2. CONTRACTOR TO VERIFY THE FOUNDATION DESIGN OF THE EXISTING WALL IN FIELD PRIOR TO DEMOLITION STARTING. THE NEW RETAINING WALL SHALL HAVE THE SAME FOUNDATION DESIGN AS THE EXISTING.

SYM.	DESCRIPTION	DATE	APPROVED
	REVISIONS		
1	REVISION 1	MAY 2011	TY
2	REVISION 2	MAY 2013	TY

NOT FOR CONSTRUCTION

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MONTARA, CA 94037

PILLAR RIDGE AUXILIARY CONNECTION PROJECT

DETAILS II

DATE	JAN 2025
SCALE	AS SHOWN
DESIGN	N. MAO
DRAWN	K. CHUNG
CHECK	N. MAO
SHEET	7 OF 7

M03

DRAWING NAME: \\newserver\srt\01_PROJECTS\Montara Water and Sanitary District (1000)\01_ACTIVE\2024 Pillar Ridge Aux Connection\CAD\SHEETS\M03 DETAILS.dwg
PLOT DATE: Jan 08, 2025 - 5:45pm PLOTTED BY: Kay Chung